# APS Protocol for Reporting Construction Vibration Issues for Beamlines

## Section where used:

This procedure describes the process for Beamline Staff or Main Control Room personnel reporting suspected construction-related vibration issues to the APS Construction Vibration Measurement Task Force. It includes the steps to be used in reporting to the APS ALD Office and determination if construction activities need to be suspended.

## Changes made in this revision:

- Editorial changes
- Updated contact name in Section 3, step 9b

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## Table of Contents

# APS Protocol for Reporting Construction Vibration Issues for Beamlines

## 1 INTRODUCTION

### 1.1 Purpose

This procedure is used to define the steps to be taken when (1) beamline staff report that vibrations related to construction activities at the APS may be impacting beamline operation and data quality or (2) Main Control Room (MCR) personnel respond to an alarm from the APS Vibration Monitoring system. The procedure includes guidance on the steps to be taken by beamline staff, MCR personnel, Floor Coordinators, members of the APS Vibration Measurement Task Force Subteam 4, the APS ALD Office, MCR personnel, and construction managers. The decision to suspend construction activities will be made at the APS ALD level.

### 1.2 Scope

- Vibrations due to construction activities at the APS
- Suspension of construction activities if needed

### 1.3 Applicability

This procedure applies to vibrations caused by construction activity at the APS only.

### 1.4 Type of Procedure

This is a guidance procedure.

### 1.5 Hazard Controls

None required.

### 1.6 Reference

- CVMTF Construction Vibration MCR Alarm Levels (APS_1439112)
- CVMTF Vibration Sensor Locations (APS_1439119 )

## 2 BACKGROUND

The APS has formed a Construction Vibration Measurement Task Force (CVMTF) to deploy vibration sensors (accelerometers) on the APS experiment hall floor. The CVMTF contains four subteams responsible for the following areas:

- Subteam 1 – Coordinates construction equipment vibration tests and on-site schedules of construction details.
- Subteam 2 – Ensures readiness of beamline accelerometers to collect data and to connect with EPICS as appropriate when construction equipment is being tested and used.
- Subteam 3 – Ensures the MCR is ready to monitor SR electron movement while construction equipment is being tested and used. As necessary, this subteam will communicate when electron beam motion is out of normal.
- Subteam 4 –Works with designated beamlines when construction vibration measurements are to be monitored. This subteam will interface with beamline staff if disruptive construction-related vibrations are reported.

The CVMTF maintains and keeps current the vibration alarm levels in APS_1439112.

## 3 PROCEDURE

There are two scenarios for response to vibration related issues: 1) Beamline staff or 2) MCR personnel

If MCR personnel are responding to a vibration sensor alarm they will alert a member of the Vibration Task Force Subteam 4, with contact in the following order:

a) Mark Beno (2-3507)

b) Julie Cross (2-0592)

c) Stefan Vogt (2-3071)

d) Dale Brewe (2-0582)

Continue with Step 4

If beamline personnel are reporting vibration issues related to construction at and around the APS, the following protocol is to be followed:

1) Beamline will contact the on-duty Floor Coordinator at 2-0101 to report suspected construction related vibration issues.
   a) If the Floor Coordinator is not available, contact Bruce Glagola (2-9797) or Nena Moonier (2-8504).
2) The Floor Coordinator, Bruce Glagola, or Nena Moonier will alert a member of the Vibration Task Force Subteam 4, with contact in the following order:
   a) Mark Beno (2-3507)

b) Julie Cross (2-0592)

c) Stefan Vogt (2-3071)

d) Dale Brewe (2-0582)

3) Subteam 4 member will contact the beamline to discuss the issue being observed and understand the issue.

4) Subteam 4 member will observe vibration data (electron beam motion, accelerometer readings, beam position monitors, or other)

5) Subteam 4 member will contact additional beamlines as necessary.

6) Subteam 4 member will decide whether to recommend or to not recommend halting any activities at the construction site.

7) Subteam 4 member will take the issue to the APS ALD Office, with contact in the following order:

a) George Srajer (2-3267)

b) Denny Mills (2-5680)

c) Stephen Streiffer (2-7990)

8) The APS ALD Office will determine if the construction activity must be suspended.

9) If any construction activity is to be suspended, the ALD Office will contact

a) Rick Janik (2-6068) or

b) Andy Stevens (2-5720)

10) If construction activity is to be suspended, the ALD Office will contact a member of Subteam 4, and Subteam 4 will notify the MCR. Information to be relayed is the type of construction activity that is stopped and if/when restart permission is given. The MCR will make an announcement if a construction activity is suspended.

# 4 FEEDBACK AND IMPROVEMENT

If you are using this procedure and have comments or suggested improvements for it, please go to the APS Policies and Procedures Comment Form* to submit your input to a Procedure Administrator. If you are reviewing this procedure in workflow, your input must be entered in the comment box when you approve or reject the procedure.

Instructions for execution-time modifications to a policy/procedure can be found in the following document: Field Modification of APS Policy/Procedure (APS_1408152).

* https://www1.aps.anl.gov/Document-Central/APS-Policies-and-Procedures-Comment-Form